FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST-7326

SUMMARY

GENERAL INFORMATION	
Applicant	Sound Color
Facility Name and Address	Sound Color 4711 – 116th Street SW Mukilteo, WA 98204
Type of Facility	Professional Photofinishing
Facility Discharge Location	Latitude: 47° 52' 05" N Longitude: 122° 15' 00" W
Treatment Plant Receiving Discharge	Olympus Terrace Sewer District
Contact at Facility	Name: Lee Steigerwald Telephone #: (425) 355-3050

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INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST-7326. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to the Olympus Terrace Sewer District sanitary sewer system. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the state. Regulations adopted by the state include procedures for issuing permits and establish requirements which are to be included in the permit (Chapter 173-216 WAC).

This fact sheet and draft permit are available for review by interested persons as described in Appendix A—Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The glossary is enclosed in Appendix B.

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

HISTORY

Sound Color is a professional Burrell Color-photographic laboratory (SIC 7384) that was located in Edmonds from 1970 through May 1991. The facility was moved to Mukilteo in May 1991. The facility processes and prints color negative material for professional photographers and studios. The various activities include film processing and automated and custom printing of color negatives on color photographic paper. The facility operates three film processing and three paper processing units. The film and paper processing units are located on the main floor. The chemical solutions that feed directly into these units are stored in the upstairs portion of the building, immediately above the processing units. According to the permit application, 35,000 to 70,000 square feet per month of photo material is processed.

WASTEWATER MANAGEMENT

Process wastewater generated from both the film and paper processing units is pretreated in-house prior to discharge to Olympus Terrace Wastewater Treatment Plant (POTW). Two different methods of pretreatment are employed to recover silver at this facility. One system consists of two chemical recovery cartridges (CRC) in series for the wash water. A standby system consists of two CRC in series for back flush for the wash water system. The other system contains one electrolytic unit for the high silver bearing waste stream. The high silver bearing waste stream includes spent fixer, and replenisher/stabilizer solution. In series after the electrolytic unit is a set of three CRCs. The canisters are exchanged out based on the total hourly throughput as recommended by Hallmark Refinery. Each CRC is a Mark 26 type system which has a rated life span of 400 hours run time maximum. All wastewater including the treated wash water is collected in a collection tank prior to discharge to the sanitary sewer. Samples are obtained from this collection tank.

As reported on the application, the flow discharged from the facility has been ranging from 3,700 to 8,000 gallons per day.

The facility is no longer using K-14 bleach and has replaced it with C-41 bleach which contains no cyanide compounds.

TREATMENT PROCESSES

The facility employs one electrolytic recovery unit and ten CRCs on-site. Electrolytic recovery units work by attracting positively charged silver ions to a negatively charged cathode that is immersed in the high silver bearing waste stream which includes spent fixer, bleach-fixer, and replenisher/stabilizer solution. Electrolytic recovery units remove the majority of easily recoverable silver in a nearly pure metallic state. After the electrolytic recovery process, the effluent is treated through CRC to meet the silver effluent limit prior to discharge into the sanitary sewer.

PERMIT STATUS

The previous permit for this facility was issued on September 18, 2000. An application for permit renewal was submitted to the Department on February 18, 2004, and accepted by the Department on February 19, 2004.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

During the history of the previous permit, the Permittee has had the following violations as reported in the Discharge Monitoring Reports (DMRs):

Parameters	Dates
pH	9/00, 12/00, 3/01, 4/01
Silver	4/02, 11/02 for not reporting

WASTEWATER CHARACTERIZATION

The concentration of pollutants in the discharge was reported in the permit application and in Discharge Monitoring Reports. The proposed wastewater discharge is characterized for the following parameters:

Parameters	Maximum Concentration After Pretreatment
Flow	6,200 to 9,550 gpd (from DMRs)
TDS	1,300 mg/L
pH	between 6.0 and 9.3 s.u.
Ag (T)	1.4 mg/L

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants to the POTW (local limits). Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not interfere with the operation of the POTW.

The minimum requirements to demonstrate compliance with the AKART standards for this facility were determined previously in the last permit cycle.

The more stringent of the local limits-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110). The effluent limitations established under provision 40 CFR 459 subpart A apply to point source discharges to surface water. Sound Color currently discharges pretreated wastewater to Olympus Terrace Sewer District POTW.

Thus, the limitations established under provision 40 CFR 459 do not apply to the present discharge at the facility, except to the extent that the effluent limitations represent BPT (Best Practicable Control Technology) currently available for this type of facility. The effluent limitations set in this permit are local limitations based on past performance and best professional judgement (BPJ).

EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS

In order to protect Olympus Terrace Sewer District POTW from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, effluent limitations for certain parameters are necessary. These local limits are based on BPJ developed by Ecology to protect the POTW.

The maximum daily limits for flow, pH, total dissolved solids (TDS), and silver remain the same as in the previous permit. The effluent limits contained in this permit include the following:

Parameter	Maximum Daily
Flow	10,000 gpd
pH	Between 6 and 9 standard units
Total Dissolved Solids	2,500 mg/L
Silver (T)	2 mg/L

COMPARISON OF PROPOSED PERMIT LIMITATIONS WITH THE EXISTING PERMIT LIMITATIONS

Parameter	**Existing Permit Limits**	**Proposed Limits**
	Maximum Daily	Maximum Daily
Flow	10,000 gpd	10,000 gpd
pH	Between 6 and 9 standard units	Between 6 and 9 standard units
TDS	2,500 mg/L	2,500 mg/L
Silver	2 mg/L	2 mg/L

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, and that effluent limitations are being achieved (WAC 173-216-110).

The monitoring schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges [WAC 273-216-110 and 40 CFR 403.12 (e),(g), and (h)].

OPERATIONS AND MAINTENANCE

The proposed permit contains Condition S.5, as authorized under RCW 90.48.110, WAC 173-220-150, Chapter 173-230 WAC, and WAC 173-240-080. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

PROHIBITED DISCHARGES

Certain pollutants are prohibited from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (Chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (Chapter 173-303 WAC).

DILUTION PROHIBITED

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations.

SOLID WASTE PLAN

This proposed permit requires, under the authority of RCW 90.48.080, that the Permittee update the solid waste plan designed to prevent solid waste from causing pollution of the waters of the state and submit it to the Department.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to POTW permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending, or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes, or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control production or wastewater discharge in order to maintain compliance with the permit. Condition G10 prohibits the reintroduction of removed pollutants into the effluent stream for discharge. Condition G11 requires the payment of permit fees. Condition G12 describes the penalties for violating permit conditions.

PUBLIC NOTIFICATION OF NONCOMPLIANCE

A list of all industrial users which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters may be annually published by the Department in a local newspaper. Accordingly, the Permittee is apprised that noncompliance with this permit may result in publication of the noncompliance.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics. To be consistent with the Snohomish Basin planning cycle for permit issuance, this permit will expire on June 30, 2009.

REFERENCES FOR TEXT AND APPENDICES

1. Code of Federal Regulations, 40 CFR 459, for Photographic Point Source Category.
2. Environmental Management and Pollution Prevention, a guide for photoprocessing, published by Washington State Department of Ecology, September 1994.
3. Pollution Prevention and Treatment Alterations for Silver-Bearing Effluents, with Special Emphasis on Photoprocessing, published by Washington State Department of Ecology, December 1997.
4. State Waste Discharge Permit Application submitted by the Permittee on January 29, 2004.
5. State Waste Discharge Permit Program, Chapter 173-216 WAC, September 22, 1993.

APPENDICES

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

The Department published a Public Notice of Draft (PNOD) on May 13, 2004, in *The Herald* to inform the public that a draft permit and fact sheet were available for review. Interested persons were invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents were available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments were mailed to:

Water Quality Permit Coordinator
Department of Ecology
Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008-5452

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30)-day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (425) 649-7201, or by writing to the address listed above.

This permit was written by Jeanne Tran, P.E.

APPENDIX B—GLOSSARY

Average Monthly Discharge Limitation—The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)—Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural, and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5—Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass—The intentional diversion of waste streams from any portion of the collection or treatment facility.

Categorical Pretreatment Standards—National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Compliance Inspection - Without Sampling—A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling—A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Engineering Report—A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample—A single sample or measurement taken at a specific time or over as short a period of time as is feasible.

Industrial User—A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business; from the development of any natural resource; or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Interference—A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) [including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA], sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Local Limits—Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Maximum Daily Discharge Limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Pass-through—A discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

pH—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Potential Significant Industrial User—A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day; or

b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g., facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

Significant Industrial User (SIU)—

1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and

2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement [in accordance with 40 CFR 403.8(f)(6)].

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of nondelegated POTWs or to the POTW in the case of delegated POTWs.

Slug Discharge—Any discharge of a nonroutine, episodic nature, including but not limited to an accidental spill or a noncustomary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

State Waters—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Dissolved Solids—That portion of total solids in water or wastewater that passes through a specific filter.

Water Quality-based Effluent Limit—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C—PROCESS FLOW DIAGRAM